



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,859	10/12/2001	Ross Alexander Saunders	SOI 0001 PA	2531
27572	7590	09/28/2006	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			NGUYEN, HANH N	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			2616	

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,859

Applicant(s)

SAUNDERS ET AL.

Examiner

Hanh Nguyen

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 7/20/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8 and 11-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,11,12 and 17-33 is/are rejected.
- 7) ☒ Claim(s) 13-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

The amendment filed on 7/20/06 has been entered. Claims 1, 3-8, 11-33 are now pending.

Claim Objections

Claim 31 is objected to because of the following informalities: it is not clearly stated what is meant by "transmitting information 5" over said supervisory network. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-8, 17, 18, 20-33 are rejected under 35 USC 103(a) as being unpatentable over Chang et al. (Us Pat. 6,545,781 B1) in view of Barry et al. (Us pat. 6,433,903 B1).

In claims 1, 17, 18 and 31, Chang et al. discloses an optical network (WDM optical network, fig.5), a method for providing differentiated services for a plurality of WDM layer applications (see fig.2, providing data routing from source 123 to destination 122 based on priority data included in header 210; see col.9, lines 27-400, and traffic demand from node 501 to node 504; see fig.5, col.12, lines 52-60). The method comprises transmitting user traffic over a range of wavelengths along a communication path in an optical network (see fig.5, col.12, lines 30-40; transmitting data over wavelengths 1, 2 and 3 along network nodes 501, 502, 503, 504 in optical network); connecting network elements along the communication path via an optical

Art Unit: 2616

supervisory channel (see fig.5, col.12, lines 20-30; optical supervisory channel 221 connects to each of network elements 501-507); transmitting control data for supporting a class of service (COS) over the supervisory channel to each respective network elements (management node 220 communicates via OSC 221 to determine that a fiber optical link from network elements 501-504 is needed based upon a traffic demand; see col.12, lines 52-55); and executing a WDM layer application at each of the network elements (each network element takes necessary steps such as add, drop, drop-and continue based on control information in the header; see col.9, lines 28-35) to operate the network element according to the control data. Chang et al. does not disclose the supervisory channel being transmitted at a wavelength different than the range of wavelengths being used to transmit the user traffic. Barry et al. discloses the supervisory channel being transmitted at a wavelength different than the range of wavelengths being used to transmit the user traffic (see fig.1, col.4, lines 25-32 & 58-63; OSC channel has a separate wavelength from wavelengths of WDM data channels). Therefore, it would have been obvious to transmit the OSC in Chang et al. at a separate wavelength from the range of wavelengths being used to transmit the data from the source node to destination node in the WDM optical network. The motivation is to avoid interference during transmitting signal.

In claims 3, 4, 5, 6, 7 and 23-30, Chang et al. discloses the control data provides priority level (control information comprises dropping low priority packet; col.9, lines 28-32 and col.10, lines 10-16), latency level (network element provides delay needed for a short time to set up; col.9, lines 40-47), loss level (traffic demand; see col.12, lines 52-55).

In claim 19, Chang et al. discloses one or more supervisory channels provided between any two adjacent nodes of the network (see fig.5, multiple optical supervisory channels 221 are

provided between a management node 220 and each of network elements 501-507; see col.12, lines 20-30).

In claims 20, 21, 22, Chang et al. discloses supervisory network is an ATM network (fig.1, ATM network 130 comprising ATM switches), IP/TCP network comprising IP routers (network 110 comprising IP routers).

In claims 32 and 33, the limitations of these claims have been addressed in claim 1.

In claim 8, Change et al. discloses the layer applications including safety shutdown (state of network element such as whether it is operational or shutdown for an emergency; see col.12, lines 30-33), internode control loop, alarm, signalling, configuration request (the global routing table configures ports of network elements to create communication links; col.12, lines 50-53), monitor control (management node 220 determines optic links based upon traffic demand between network elements; see col.12, lines 52-55), orderwire and remote software download (download global routing tables to each network elements using supevisory channels 221; see col.12, lines 45-50).

Claims 11, 12 are rejected under 35 USC 103(a) as being unpatentable over Chang et al. (Us Pat. 6,545,781 B1) in view of Barry et al. (Us pat. 6,433,903 B1), and further in vew of Newell et al. (US pat. 7,099,334 B2).

In claim 11, Change does not disclose the control data transported in the supervisory network comprises protocol data unit (PDU). Newell et al. discloses the control data transported in the supervisory network comprises protocol data unit (PDU) (see fig.1A, col.6, lines 37-42 & line 50 to col.7, line 15; ATM node 50 allocates resource to ATM node 40 by sending PDU in control channel). Therefore, it would have been obvious to send PDU in the optical supervisory

channel in Change et al. to control QoS to network elements. The motivation is to provide traffic demand and wavelength at each network elements.

In claim 12, Change does not disclose at a first network element generating an add supervisory PDU comprising QoS information destined to said WDM layer application operating at a second network element; providing said add supervisory PDU with an identification tag; and transmitting said add supervisory PDU over said supervisory network. Newell et al. discloses, in fig.6, a first network element (a response ATM node that receiving setup PDU, step 220) generating an add supervisory PDU comprising QoS information destined to said WDM layer application operating at a second network element (create a response PDU that will be transmitted to an initiating ATM node, step 250); providing said add supervisory PDU with an identification tag (at step 260, adding transmit data service label to the responding PDU); and transmitting said add supervisory PDU over said supervisory network (step 270, transmitting the response PDU to the initiating ATM node over MPLS network). See col.10, lines 18-45.

Therefore, it would have been obvious to use the PDU in the OSC of Change et al. in order to generating an add supervisory PDU comprising QoS information destined to said WDM layer application operating at a second network element; providing said add supervisory PDU with an identification tag; and transmitting said add supervisory PDU over said supervisory network the motivation is to allocate required resource to the source node based upon the PDU in the OSC channel.

Allowable Subject Matter

Claims 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In claim 13, the prior art does not disclose forwarding said add supervisory PDU to an appropriate output port queue; queuing said add supervisory PDU according to said QoS information; and routing a plurality of said add supervisory PDU from different queues over said supervisory network according to said CoS.

In claim 14, the prior art does not disclose at a first network element,

- a) receiving a drop supervisory PDU comprising Qos information;
- b) determining from an identification tag that said drop supervisory PDU is destined to said first network element;
- c) extracting said QOS information from said drop supervisory PDU; and
- d) executing said WDM layer application according to said Qos information.

In claim 15, the prior art does not disclose at a first network element,

- a) receiving a continue supervisory PDU comprising QOS information;
- b) determining from an identification tag that said supervisory PDU is destined to a second network element of said communication path; and
- c) transmitting said supervisory PDU over said supervisory network.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Greenberg et al. (US pat. 6,970,451 B1);

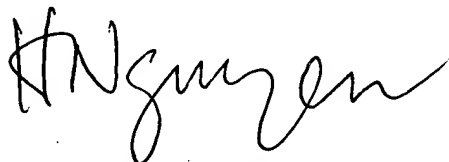
Maxham et al. (US pat. 6,411,407 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Friday from 8:30 to 5:30. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on 571 272 7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

A handwritten signature in black ink, appearing to read 'H. Nguyen', with a stylized, cursive script.

**HANH NGUYEN
PRIMARY EXAMINER**